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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT PAPER NUMBER

2664

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/752,828	<b>Applicant(s)</b> FERGUSON ET AL.	
	<b>Examiner</b> Andrew C Lee	<b>Art Unit</b> 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/18/2001</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

The Examiner wishes to thank the Applicants for commenting the discrepancies on the form PTO-1449 and Bib Data Sheet.

***Drawings***

1. Figure 5 should be designated by a legend such as — Prior Art — because only that which is old is illustrated. See MPEP § 608.02(g). (Scrambler with polynomial  $x^{29}+1$  should be cited from reference provided by Applicants — “Information Disclosure Statement (dated 4/18/2001), NPL documents - S. Merchant’s “ppp OVER sonet (sdh) AT Rates from STS-1 (AU-3) to STS-192c (AU-4-64c/STM-64) <draft-merchant-pppext-sonet-sdh-00.txt>, November 1998, § 4.6 HDLC-32 Data Scrambling (SCR-29) A self-synchronizing scrambler shall be used that shall be disabled (while retaining its internal state) between packets. The specific scrambler is for further study, but we tentatively propose the self-synchronizing scrambler corresponding to the polynomial  $x^{29}+1$ . (page 9 of 14)”; § 4.8.1 Receive Direction 5. HDLC –32 Data descrambling using  $x^{29} + 1$  [provisional] self-synchronizing descrambler. (Page 10 of 14); § 4.8.2 Receive Direction 3. HDLC –32 Data descrambling using  $x^{29} + 1$  [provisional] self-synchronizing descrambler. (Page 11 of 14)).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because of the following informalities:
- Page 8, line 29 " HDLC descrambler 82 is an  $x^{29} + 1$  self-synchronous scrambler" should be cited and referenced to (S. Merchant: § 4.6 HDLC-32 Data Scrambling (SCR-29), last sentence of the first paragraph "but we tentatively propose the self-synchronizing scrambler corresponding to the polynomial  $x^{29} + 1$ ."). The scrambler/descrambler with polynomial  $x^{29} + 1$  is not the original disclosure. It is a prior art, but the Applicants did not recite the reference.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 9, 17, 20, 24, 30, 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Federkins et al. (U.S. Patent No. 5123014).

Regarding claims 9, 17, 20, 36, Federkins et al. discloses the limitation of a method for receiving data at a data receiving system (Fig. 4, element 450,

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column 3, lines 49 – 54), comprising: receiving an idle time synchronizing packet that was generated by a transmitting system during idle time at the transmitting system (column 3, lines 7 – 9; lines 55 – 58); and synchronizing the data receiving system with the transmitting system by processing the idle time synchronizing packet (column 3, lines 58 – 61), the processing the idle time synchronizing packet causing, the data receiving system to be in a correct state with respect to whether an inter-frame time fill byte or a data byte is being received (column 4, lines 31 – 53).

Regarding claims 24, 30, Federkins et al. discloses the limitation of a method for synchronizing a transmitting system with a receiving system (Abstract, lines 1 – 5), comprising: forwarding data from the transmitting system to the receiving system when data is being received by the transmitting system (column 3, lines 40 – 58); creating an idle time synchronizing packet during idle time when the transmitting system is not receiving data (column 1, lines 60 - 65); forwarding the idle time synchronization packet to the receiving system (column 1, lines 65 – 68; column 2, lines 1 – 2); and processing the idle time synchronization packet at the receiving system to synchronize the receiving system with the transmitting system column 3, lines 54 – 61), wherein: the processing the idle time synchronization packet further comprises: causing the receiving system to be placed in a correct state with respect to whether an inter-frame time fill byte or a data byte is being received (column 4, lines 31 – 53).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 5, 7, 10 – 13, 15, 18 – 19, 21 – 22, 25 – 26, 28 – 29, 31 – 32, 34 – 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Federkins et al. (U.S. Patent No. 5123014) in view of Gulick (U.S. Patent No. 5845085).

Regarding claims 1, 25, 31, Federkins et al. discloses the limitation of a method of processing data in a data transmitting system (Abstract, lines 1 – 5), comprising: forwarding data for further processing in the data transmitting system when data is being received (column 1, lines 54 – 59) ; generating idle time synchronizing, information during idle time when data is not being received (column 1, lines 60 – 65), the idle time synchronizing information for synchronizing a data receiving system with the data transmitting system (column 1, lines 65 – 68), the generating idle time synchronizing information comprising: generating packet information by processing the data and the idle time synchronizing information in accordance with a packet protocol (column 3, lines 40 – 41). Federkins et al. does not disclose expressly preparing a runt abort

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packet. Gulick discloses the limitation of preparing a runt abort packet (column 1, lines 61 – 65). It would have been obvious to modify Federkins et al. to include a preparing a runt abort packet such as that taught by Gulick in order to have a data link controllers and a receiver for a high-level data-link controller which is capable of performing flag and abort detections, in-frame and out-of-frame determinations, zero-deletions, and several higher level controlling functions.

Regarding claims 2, 10, 11, 18, 19, 21, 22, 26, 29, 35, Federkins et al. discloses the limitation of a method of processing data in a data transmitting system (Abstract, lines 1 – 5), Federkins et al. does not disclose the method of claim 1, wherein the preparing a runt abort packet includes: preparing a packet having a length of less than six bytes. Gulick discloses the limitation of the method of claim 1, wherein the preparing a runt abort packet includes: preparing a packet having a length of less than six bytes (column 1, lines 61 – 65). It would have been obvious to modify Federkins et al. to include a method of claim 1, wherein the preparing a runt abort packet includes: preparing a packet having a length of less than six bytes such as that taught by Gulick in order to have a data link controllers and a receiver for a high-level data-link controller which is capable of performing flag and abort detections, in-frame and out-of-frame determinations, zero-deletions, and several higher level controlling functions.

Regarding claims 3, 32, Federkins et al. discloses the limitation of a method of processing data in a data transmitting system (Abstract, lines 1 – 5),

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Federkins et al. does not disclose the method of claim 2, wherein the step of generating idle time synchronizing information preparing a runt abort packet includes: preparing a runt abort packet having an abort byte sequence at an end of the runt abort packet. Gulick discloses the limitation of disclose the method of claim 2, wherein the step of generating idle time synchronizing information preparing a runt abort packet (column 1, lines 61 – 65; column 2, lines 18 – 31) includes: preparing a runt abort packet having an abort byte sequence at an end of the runt abort packet (column 2, lines 32 – 43). It would have been obvious to modify Federkins et al. to include a method of claimed wherein the step of generating idle time synchronizing information preparing a runt abort packet includes: preparing a runt abort packet having an abort byte sequence at an end of the runt abort packet such as that taught by Gulick in order to have a data link controllers and a receiver for a high-level data-link controller which is capable of performing flag and abort detections, in-frame and out-of-frame determinations, zero-deletions, and several higher level controlling functions.

Regarding claims 4, 12, Federkins et al. discloses the limitation of the method of claim 1, further including: loading idle time indication information into a data format consistent with the packet protocol (column 3, lines 40 – 44).

Regarding claims 5, 13, Federkins et al. discloses the limitation of the method of claim 4, further including: alternately forwarding the idle time



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synchronization information and idle time indication information (column 1, lines 60 – 65; column 3, lines 7 – 9; Fig. 3).

Regarding claims 7, 15, 28, 34, Federkins et al. discloses the limitation of the method of claim 1, further including: creating network information by processing the packet information in accordance with a transport protocol (column 1, lines 65 – 68; column 2, lines 39 – 44); and forwarding the network information to a data receiving system (column 2, lines 1 – 2; column 3, lines 44 – 48).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8, 14, 16, 23, 27, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Federkins et al. (U.S. Patent No. 5123014) and Gulick (U.S. Patent No. 5845085) as applied to claims 1 – 13, 15, 16 – 22, 24 – 32, 34 – 36 above, and further in view of Anderson et al. (U.S. Patent No. 5369703 B1).

Regarding claims 6, 14, both Federlins et al. and Gulick fail to disclose expressly the apparatus of claim 9, wherein the packet processing element comprises: a scrambler for scrambling the idle time synchronizing information.

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Anderson et al. discloses the limitation of the apparatus of claim 9, wherein the packet processing element comprises: a scrambler for scrambling the idle time synchronizing information (Fig. 2, element 140, column 3, lines 52 – 62). It would have been obvious to modify both Federlins et al. and Gulick to include an apparatus of claimed wherein the packet processing element comprises: a scrambler for scrambling the idle time synchronizing information such as that taught by Anderson et al. in order to provide a protocol governing the transmission of a datagram received from network elements employing the Internet Protocol (IP) or a similar protocol.

Regarding claims 8, 16, both Federlins et al. and Gulick fail to disclose expressly the apparatus of claim 15, wherein the network processing element comprises: a scrambler for scrambling the packet information. Anderson et al. discloses the limitation of the apparatus of claim 15, wherein the network processing element comprises: a scrambler for scrambling the packet information (Fig. 2, element 500, column 4, lines 9 – 12; column 5, lines 1 – 9). It would have been obvious to modify both Federlins et al. and Gulick to include an apparatus of claimed wherein the network processing element comprises: a scrambler for scrambling the packet information such as that taught by Anderson et al. in order to provide a protocol governing the transmission of a datagram received from network elements employing the Internet Protocol (IP) or a similar protocol.

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Regarding claims 23, 27, 33, both Federlins et al. and Gulick fail to disclose expressly the apparatus of claimed wherein the processing element comprises: a descrambler for descrambling the idle time synchronizing packet. Anderson et al. discloses the limitation of the apparatus of claimed wherein the processing element comprises: a descrambler for descrambling the idle time synchronizing packet (Fig. 5, element 705, column 5, lines 35 – 42). It would have been obvious to modify both Federlins et al. and Gulick to include an apparatus of claimed wherein the processing element comprises: a descrambler for descrambling the idle time synchronizing packet such as that taught by Anderson et al. in order to provide a protocol governing the transmission of a datagram received from network elements employing the Internet Protocol (IP) or a similar protocol.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

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period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12 Jan 2005

  
Ali Patel  
Primary Examiner